

DOCUMENT RESUME

05671 - [B1226191]

The National Oceanic and Atmospheric Administration Organization Organic Act. April 18, 1978. 9 pp.

Testimony before the House Committee on Science and Technology: Environment and the Atmosphere Subcommittee; by Baltas E. Birkle, Deputy Director, Community and Economic Development Div.

Contact: Community and Economic Development Div.

Organization Concerned: National Oceanic and Atmospheric Administration.

Congressional Relevance: House Committee on Science and Technology, Environment and the Atmosphere Subcommittee.

Authority: National Oceanic and Atmospheric Administration Organic Act. H.R. 9708 (95th Cong.). H.R. 6669 (95th Cong.).

H.R. 9708, the National Oceanic and Atmospheric Administration (NOAA) Organic Act, recognizes the relationship between oceans and the atmosphere and the need for a national ocean policy. The bill designates NOAA as the lead civilian agency with responsibility for coordinating and carrying out the policy. During the past 4 years, GAO reviewed the following NOAA activities: weather modification research, coastal zone management, weather forecasting, specialized weather services, Outer Continental Shelf development environmental studies, and environmental monitoring by satellite. Some of the problems noted in the programs were insufficient resources, ineffective coordination with other agencies and with States, and needs for better definitions of policy and responsibilities. The studies pointed to the need for a strong lead agency to plan, coordinate, and improve the management of atmospheric science activities. (HTW)

6191
UNITED STATES GENERAL ACCOUNTING OFFICE
WASHINGTON, D.C. 20548

FOR RELEASE ON DELIVERY
EXPECTED AT 10:00 A.M. EST
TUESDAY, APRIL 18, 1978

STATEMENT OF
B.E. BIRKLE, DEPUTY DIRECTOR
COMMUNITY AND ECONOMIC DEVELOPMENT DIVISION

BEFORE THE
SUBCOMMITTEE ON THE ENVIRONMENT AND THE ATMOSPHERE
HOUSE COMMITTEE ON SCIENCE AND TECHNOLOGY

ON

THE NATIONAL OCEANIC AND
ATMOSPHERIC ADMINISTRATION
ORGANIZATION ORGANIC ACT

MR. CHAIRMAN AND MEMBERS OF THE SUBCOMMITTEE:

WE ARE HERE TODAY AT YOUR INVITATION TO DISCUSS SOME OF
OUR WORK AT THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
(NOAA).

THE SUBCOMMITTEE IS CONSIDERING H.R. 9708, THE NOAA
ORGANIC ACT, WHICH RECOGNIZES THE RELATIONSHIP BETWEEN THE
OCEANS AND ATMOSPHERE AND THE NEED FOR A NATIONAL OCEAN POLICY.
THE BILL DESIGNATES NOAA AS THE LEAD CIVILIAN AGENCY WITH RE-
SPONSIBILITY FOR COORDINATING AND CARRYING OUT A NATIONAL
OCEAN POLICY IN ORDER TO IMPROVE THE UNDERSTANDING, ASSESSMENT,
DEVELOPMENT, UTILIZATION, CONSERVATION, AND PROTECTION OF
OCEAN AND COASTAL RESOURCES, AND THE ATMOSPHERE.

WHILE THE CURRENT BILL SEEKS TO ESTABLISH AN OCEAN POLICY
AND ESSENTIALLY TO CODIFY NOAA'S MISSIONS, IT IS OUR UNDER-
STANDING THAT THE SUBCOMMITTEE WISHES US TO FOCUS OUR ATTENTION,
TODAY, ON ENVIRONMENTAL AND ATMOSPHERIC ACTIVITIES OF NOAA.

DURING THE PAST 4 YEARS WE ISSUED REPORTS OR MADE REVIEWS DEALING WITH THE FOLLOWING ACTIVITIES:

- WEATHER MODIFICATION RESEARCH EFFORTS
- THE COASTAL ZONE MANAGEMENT PROGRAM
- THE ACCURACY OF WEATHER FORECASTING
- THE ADEQUACY OF SPECIALIZED WEATHER SERVICES
- THE OUTER CONTINENTAL SHELF DEVELOPMENT ENVIRONMENTAL STUDIES PROGRAM AND
- VARIOUS STUDIES ON THE USE OF SATELLITES IN ENVIRONMENTAL MONITORING.

WEATHER MODIFICATION RESEARCH PROGRAM

IN AUGUST 1974, WE ISSUED A REPORT TO THE CONGRESS ENTITLED "NEED FOR A NATIONAL WEATHER MODIFICATION RESEARCH PROGRAM" (B-133202). THE REPORT IDENTIFIED COMMON PROBLEMS IN FEDERAL WEATHER MODIFICATION RESEARCH HINDERING PROGRESS INCLUDING:

- NO CENTRAL AUTHORITY TO DIRECT FEDERAL DEPARTMENTS;
- INEFFECTIVE COORDINATION, AND
- INSUFFICIENT RESOURCES TO ACHIEVE TIMELY, EFFECTIVE RESULTS.

PURSUANT TO THE NATIONAL WEATHER MODIFICATION POLICY ACT OF 1976 THE SECRETARY OF COMMERCE ESTABLISHED THE WEATHER MODIFICATION ADVISORY BOARD TO ADVISE HER ON A NATIONAL POLICY AND AN ORGANIZATIONAL STRUCTURE FOR FUTURE FEDERAL PROGRAMS. THE BOARD IS PREPARING A REPORT BUT HAS NOT YET RECOMMENDED A FEDERAL ROLE IN WEATHER MODIFICATION

NOR THE FEDERAL AGENCY FOR COORDINATING WEATHER MODIFICATION RESEARCH.

COASTAL ZONE MANAGEMENT

ON DECEMBER 10, 1976, THE COMPTROLLER GENERAL ISSUED A REPORT TO THE CONGRESS ENTITLED "THE COASTAL ZONE MANAGEMENT PROGRAM: AN UNCERTAIN FUTURE" (CGD-76-107).

THE PURPOSE OF THE PROGRAM IS TO (1) ENCOURAGE AND ASSIST THE STATES IN THE EXERCISE OF THEIR RESPONSIBILITIES IN THE COASTAL ZONE THROUGH THE DEVELOPMENT AND IMPLEMENTATION OF MANAGEMENT PROGRAMS; (2) OBTAIN THE COOPERATION AND PARTICIPATION OF ALL FEDERAL AGENCIES ENGAGED IN PROGRAMS AFFECTING THE COASTAL ZONE, TOGETHER WITH STATE AND LOCAL GOVERNMENTS AND REGIONAL AGENCIES; AND (3) ENCOURAGE THE PARTICIPATION OF THE PUBLIC, FEDERAL, STATE, AND LOCAL GOVERNMENTS AND REGIONAL AGENCIES IN THE DEVELOPMENT OF COASTAL ZONE MANAGEMENT PROGRAMS CONSISTENT WITH THE PROVISIONS OF THE ACT AND ACCORDING TO PUBLISHED GUIDELINES.

IN THIS REPORT WE DISCUSSED THE PROBLEMS EXPERIENCED BY NOAA AND THE COASTAL STATES AND TERRITORIES IN MEETING THE OBJECTIVES OF THE COASTAL ZONE MANAGEMENT ACT OF 1972, AS AMENDED.

WE CONCLUDED THAT (1) STATES HAVE EXPERIENCED DELAYS AND HAVE HAD TROUBLE OBTAINING FUNDING, DEVELOPING NECESSARY IMPLEMENTING AUTHORITY, RECEIVING PUBLIC AND POLITICAL SUPPORT AND COORDINATING PROGRAM DEVELOPMENT WITH RELEVANT FEDERAL AGENCIES, (2) FEDERAL PARTICIPATION IN STATE PROGRAM

DEVELOPMENT HAS BEEN LIMITED, AND (3) NOAA HAS NOT ALWAYS SHOWN A GOOD UNDERSTANDING OF STATE PROBLEMS AND PROGRESS.

AT THE COMPLETION OF OUR REVIEW NONE OF THE 33 COASTAL ZONE STATES HAD APPROVED COASTAL ZONE MANAGEMENT PROGRAMS. TODAY THE COASTAL ZONE MANAGEMENT PROGRAMS OF THREE STATES-- WASHINGTON, OREGON, AND CALIFORNIA--HAVE BEEN APPROVED BY NOAA AND OTHERS ARE EXPECTED TO BE APPROVED THIS YEAR.

QUALITY OF WEATHER FORECASTS AND
OPTIONS AVAILABLE TO IMPROVE PREDICTIONS

IN OUR JANUARY 1978 REPORT TO THE CHAIRMAN, TASK FORCE ON COMMUNITY AND PHYSICAL RESOURCES, HOUSE COMMITTEE ON THE BUDGET (CED-78-33), WE COMMENTED ON THE QUALITY OF WEATHER FORECASTS AND OPTIONS AVAILABLE TO IMPROVE WEATHER PREDICTIONS FOR BOTH SHORT- AND LONG-TERM FORECASTS.

REGARDING 2-DAY SHORT-RANGE FORECASTS, WE REPORTED THAT THE NATIONAL WEATHER SERVICE (NWS) APPEARS TO HAVE ATTAINED AN ACCEPTABLE LEVEL OF ACCURACY FOR PRECIPITATION AND TEMPERATURE IN TERMS OF NATIONAL AVERAGES. THE LEVEL OF ACCURACY, HOWEVER, VARIES FOR SPECIFIC SECTIONS OF THE COUNTRY. FOR EXAMPLE, ALTHOUGH THE NATIONWIDE LEVEL OF ACCURACY FOR PRECIPITATION FOR 1976 WAS 85.6 PERCENT, THE AVERAGE RATE OF ACCURACY FOR REGIONS RANGED FROM 77.0 PERCENT FOR THE ALASKIAN REGION TO 89.9 PERCENT FOR THE WESTERN REGION. WE POINTED OUT THAT IN SHORT-TERM FORECASTING THE DEGREE OF ACCURACY BECOMES MUCH MORE SIGNIFICANT IN THE CASE OF SEVERE WEATHER, SUCH AS TORNADOES, WHERE LIFE AND PROPERTY ARE THREATENED.

ACCORDING TO NWS, RESOURCES WHICH WOULD CONTRIBUTE TO IMPROVING SHORT-RANGE FORECASTING INCLUDE MORE OBSERVATION STATIONS, MORE SOPHISTICATED EQUIPMENT, AND MORE FORECASTERS. FOR EXAMPLE NWS SAID A DENSER NETWORK OF OBSERVATIONS IN THE NORTHEAST PACIFIC OCEAN WOULD PROVIDE IMPROVED INFORMATION ON THE DEVELOPMENT OF STORM SYSTEMS.

IN THE AREA OF LONG-RANGE PREDICTIONS, WE REPORTED THAT NWS'S PRESENT ABILITY FALLS FAR SHORT OF BEING USEFUL TO PLANNERS AND POLICYMAKERS FOR OPERATIONAL PURPOSES BECAUSE THEY ARE GENERAL IN NATURE, THEY COVER BROAD GEOGRAPHICAL AREAS, AND THEY EXTEND TO ONLY 90 DAYS.

THE PRESENT STATE OF THE ART IN LONG-RANGE FORECASTING IS SUCH THAT THE BEST POTENTIAL FOR IMPROVEMENT LIES IN RESEARCH AND DEVELOPMENT PROGRAMS. ONE AREA BEING RESEARCHED INVOLVES THE RELATIONSHIP BETWEEN SURFACE SEA TEMPERATURE AND LONG-RANGE WEATHER FORECASTING. ANOTHER AREA INVOLVES THE RELATIONSHIP OF THE WOBBLE OF THE EARTH'S AXIS AND LONG-RANGE WEATHER FORECASTING. NOAA IS ALSO ATTEMPTING TO IMPROVE LONG-RANGE FORECASTS WITH MORE SOPHISTICATED MATHEMATICAL COMPUTER MODELS.

THE CONGRESS HAS RECOGNIZED THE NEED FOR IMPROVING LONG-RANGE FORECASTING. LEGISLATION (H.R. 6669) HAS BEEN INTRODUCED TO ESTABLISH A NATIONAL CLIMATE PROGRAM. ALSO THE INTERDEPARTMENTAL COMMITTEE FOR ATMOSPHERIC SCIENCE HAS PREPARED A PLAN WHICH PROVIDES A MEANS FOR FEDERAL AGENCIES TO COORDINATE CLIMATIC RESEARCH. NOAA HAS TAKEN ACTION ON ONE OF THE COMMITTEE'S RECOMMENDATIONS AND ESTABLISHED A NATIONAL CLIMATE PROGRAM COORDINATING OFFICE.

NWS'S ROLE TO PROVIDE
SPECIALIZED WEATHER SERVICES

IN A MARCH 29, 1978, REPORT TO THE CHAIRMAN, HOUSE COMMITTEE ON SCIENCE AND TECHNOLOGY, ENTITLED "THE CONGRESS SHOULD CLEARLY DEFINE THE NATIONAL WEATHER SERVICE'S ROLE TO PROVIDE SPECIALIZED WEATHER SERVICES" (CED-78-77) WE DISCUSSED NWS'S ROLE AND RESPONSIBILITIES FOR PROVIDING SPECIALIZED WEATHER SERVICES TO FEDERAL AGENCIES.

THE SERVICE'S BASIC MISSION IS TO PROVIDE METEOROLOGICAL SERVICES TO MEET PUBLIC NEEDS OR THE COMMON NEEDS OF FEDERAL AGENCIES. IT ALSO PROVIDES SPECIALIZED SERVICES--INCLUDING THE FACILITIES, PRODUCTS, AND DISTRIBUTION MECHANISMS-- FOR SERVICING THE METEOROLOGICAL NEEDS OF SPECIALIZED USERS. THESE SERVICES INCLUDE AGRICULTURAL WEATHER, AVIATION WEATHER, MARINE WEATHER, FORESTRY WEATHER, ENVIRONMENTAL AIR QUALITY, AND WEATHER CONDITIONS AFFECTING ACTIVITIES SUCH AS SPACE FLIGHT OPERATIONS AND ENERGY DEVELOPMENT, INCLUDING ATOMIC TESTING. ABOUT \$32 MILLION OF THE SERVICE'S TOTAL FISCAL YEAR 1978 BUDGET OF \$185 MILLION IS FOR SPECIALIZED SERVICES.

WE CONCLUDED THAT NWS'S ROLE AND RESPONSIBILITIES FOR PROVIDING SPECIALIZED WEATHER SERVICES TO FEDERAL AGENCIES NEED TO BE CLEARLY DEFINED. BECAUSE HIGHER PRIORITIES HAVE BEEN PLACED ON MORE CLEARLY DEFINED RESPONSIBILITIES, THE COMMITMENT TO PLANNING AND SUPPORTING SPECIALIZED WEATHER SERVICES HAS NOT BEEN ADEQUATE AND IT APPEARS UNLIKELY THAT THE NEED FOR EXPANDED SERVICES WILL BE MET.

WE RECOMMENDED THAT THE CONGRESS (1) CLEARLY DEFINE THE NWS'S ROLE AND RESPONSIBILITIES FOR PROVIDING SPECIALIZED WEATHER SERVICES TO USER AGENCIES AND (2) ASSURE THAT RESOURCES AVAILABLE TO THE SERVICE ARE ADEQUATE TO CARRY OUT THE RESPONSIBILITIES. WE ALSO RECOMMENDED THAT THE SECRETARY OF COMMERCE ASSURE THAT SPECIFIC OPERATIONAL PLANS FOR SPECIALIZED WEATHER SERVICES ARE FORMALLY AGREED TO BY IT AND THE USER AGENCIES AND THAT THE SECRETARY, TOGETHER WITH USER AGENCIES AND IN CONSIDERATION OF OTHER PROGRAM PRIORITIES, PROVIDE SUCH SERVICES THROUGH REALLOCATION OF EXISTING RESOURCES.

OUTER CONTINENTAL SHELF DEVELOPMENT
ENVIRONMENTAL STUDIES PROGRAMS

WE ARE COMPLETING A REVIEW DEALING WITH ENVIRONMENTAL STUDIES IN SUPPORT OF OUTER CONTINENTAL SHELF DEVELOPMENT. SPECIFICALLY, WE HAVE ADDRESSED THE OVERALL STUDIES PROGRAM AND ALSO FOCUSED ON NOAA'S MANAGEMENT OF STUDIES IN ALASKA.

WE FOUND THAT THERE IS LITTLE AGREEMENT AMONG FEDERAL AND STATE AGENCIES ON (1) HOW THE ENVIRONMENTAL STUDIES CAN BEST BE USED IN THE DECISIONMAKING PROCESS AFFECTING DEVELOPMENT OF THE OUTER CONTINENTAL SHELF, AND (2) WHAT TYPE OF INFORMATION IS NEEDED TO ASSESS THE ENVIRONMENTAL IMPACT OF OIL AND GAS DEVELOPMENT IN THE OUTER CONTINENTAL SHELF. THESE PROBLEMS ARE COMPOUNDED BY THE ABSENCE OF COORDINATED GOVERNMENT-WIDE PLANS WHICH ADEQUATELY DEFINE THE INFORMATION NEEDS OF OUTER CONTINENTAL SHELF MANAGERS AND THE DIRECTION AND APPROACH NEEDED TO OBTAIN SUCH INFORMATION.

NOAA'S INVOLVEMENT IN MULTI-AGENCY
SATELLITE MONITORING PROGRAMS

WE HAVE REPORTED TO THE CONGRESS ON SEVERAL REMOTE SENSING SATELLITE PROJECTS IN WHICH NOAA, THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION (NASA), AND OTHER AGENCIES PARTICIPATE. THESE PROJECTS INVOLVE EARTH RESOURCES AND OCEANIC MONITORING. NOAA HAS BEEN INVOLVED IN VARYING DEGREES, IN THESE PROJECTS. OUR REPORTS POINT OUT THE LACK OF A CLEAR FEDERAL GOVERNMENT POLICY ROLE IN SATELLITE-BASED REMOTE SENSING TECHNOLOGY AND BRING OUT THE INTERRELATIONSHIPS THAT EXIST AMONG WEATHER, POLLUTION, ENVIRONMENTAL AND EARTH RESOURCES MONITORING SYSTEMS.

IN OUR STAFF STUDY, "LAND SATELLITE PROJECT" (PSAD-76-74), ISSUED IN JANUARY 1976, WE SUGGESTED THAT THE PARTICIPATING AGENCIES DEVELOP A PLAN WHICH INCLUDED REQUIREMENTS, MILESTONES, AND DATES FOR EVALUATING PROGRESS BEING MADE TOWARD THE GOAL OF DECIDING IF THERE SHOULD BE AN OPERATIONAL SATELLITE SYSTEM. IN OUR JUNE 1977 REPORT ON "LANDSAT'S ROLE IN AN EARTH RESOURCES INFORMATION SYSTEM" (PSAD-77-58), WE POINTED OUT THAT NO AGREEMENT HAD BEEN REACHED AMONG THE USERS ON WHAT PERFORMANCE OBJECTIVES MUST BE ACHIEVED TO JUSTIFY AN OPERATIONAL SYSTEM. WE RECOMMENDED THAT THE DIRECTOR OF THE OFFICE OF SCIENCE AND TECHNOLOGY POLICY, IN CONJUNCTION WITH COGNIZANT FEDERAL AGENCIES, STUDY THE ISSUES INVOLVED AND RECOMMEND A GOVERNMENT POLICY ROLE IN SATELLITE-BASED, REMOTE SENSING TECHNOLOGY. IN FOLLOWING UP ON THIS RECOMMENDATION, WE NOTED THAT ONLY LIMITED PROGRESS HAS BEEN MADE.

NOAA IS ALSO INVOLVED IN NASA'S SEASAT-A PROJECT. IN OUR SEPTEMBER 1977 REPORT TO THE CONGRESS ON "THE SEASAT-A PROJECT: WHERE IT STANDS TODAY" (PSAD-77-126), WE POINTED OUT THAT THERE WAS NO FORMALIZED AGREEMENT BETWEEN NOAA AND NASA TO MAKE CERTAIN THAT THE RESPONSIBILITIES OF EACH AGENCY ARE CLEARLY DEFINED.

NOAA IS ALSO INVOLVED IN THE LARGE AREA CROP INVENTORY EXPERIMENT (LACIE) WHICH INVOLVES CROP FORECASTING BY SATELLITE. IN OUR APRIL 1978 REPORT TO THE CONGRESS ON "CROP FORECASTING BY SATELLITE: PROGRESS AND PROBLEMS" (PSAD-78-52), WE RECOMMENDED THAT, SINCE THERE HAVE BEEN TECHNICAL PROBLEMS IN REACHING LACIE OBJECTIVES AND THE RESEARCH DIRECTION HAS CHANGED, COGNIZANT CONGRESSIONAL COMMITTEES SHOULD BE PROVIDED WITH PERIODIC ASSESSMENTS OF THE LACIE PROJECT AND RELATED EFFORTS.

- - - -

IN SUMMARY, OUR AUDIT WORK HAS POINTED TO THE NEED FOR A STRONG LEAD AGENCY TO PLAN, COORDINATE, AND IMPROVE THE MANAGEMENT OF ATMOSPHERIC SCIENCE ACTIVITIES. ACCORDINGLY, WE SUPPORT THE CONCEPT OF A STRONG LEAD AGENCY FOR ATMOSPHERIC SCIENCES.

MR. CHAIRMAN, THIS CONCLUDES MY PREPARED STATEMENT. WE SHALL BE GLAD TO RESPOND TO ANY QUESTIONS.